

## CLAIMS:

What is claimed is:

1        1.    A flexible reclosable stand-up package formed on a form, fill, and seal packaging  
2        machine from a continuous sheet of packaging film, said package comprising after  
3        formation:

4            a package body having a top end, a bottom end, a front wall, and a back wall  
5            disposed between two vertical edge seals, said walls formed from a segment of said  
6            sheet of packaging film and having a longitudinal formation axis extending between  
7            said vertical edge seals, said bottom end having a crease formed in the packaging  
8            material, said film joined to itself at said vertical edge seals and at a back seal  
9            extending along said back wall between said vertical seals, said top end, bottom end,  
10          crease and back seal being generally parallel with said longitudinal formation axis;  
11          and a reclose strip attached to an exterior surface of said back wall and extending  
12          between said vertical edge seals, said strip being generally parallel with said  
13          longitudinal formation axis and spaced from said top end a distance sufficiently great  
14          as to allow the package to be manually folded in a direction from the top toward the  
15          strip before the fold engages the strip.

1        2.    The flexible reclosable stand-up package of Claim 1, wherein said sheet of packaging  
2        film includes a graphics layer which is oriented for viewing by a consumer when said  
3        package is stood on its bottom end.

1        3.    The flexible reclosable stand-up package of Claim 1, wherein said reclose strip  
2        comprises a two-sided length of tape with a first side bonded to said exterior surface of said  
3        back wall by a first pressure sensitive adhesive of some strength and a second side of said  
4        tape being coated with a second pressure sensitive adhesive having a strength less than the  
5        strength of the first adhesive and having the characteristics of bonding to both the tape and  
6        the exterior surface of the package and in tension, releasing the package material before  
7        releasing the tape such that the second adhesive will remain on the tape when the surface of  
8        the package material separates from the second adhesive.

1        4.    The flexible reclosable stand-up package of Claim 3, wherein said reclose strip further  
2        comprises a peel strip attached to and covering the second adhesive, the second adhesive  
3        having the characteristic when in tension of releasing the peel strip prior to releasing the  
4        tape.

1        5.    A method for making a flexible reclosable stand-up package on a vertical form, fill, and  
2        seal machine, said method comprising the steps of:

3            a)    advancing a continuous sheet of packaging film towards said vertical form, fill, and  
4            seal machine, wherein said packaging film has graphics oriented perpendicular to the  
5            direction of travel of said film;

6            b)    attaching a length of reclose strip to a surface of said advancing sheet of packaging  
7            film along the longitudinal axis of said sheet of packaging film;

8            c)    feeding said packaging film into said vertical form, fill, and seal machine;

9            d)    forming said packaging film into a tube on said vertical form, fill, and seal machine  
10           and forming a longitudinal seal, wherein said side of packaging film having said reclose  
11           strip attached thereto is situated on the exterior of said tube;

12           e)    forming a vertical crease in said tube of packaging film prior to sealing said tube  
13           transversely;

14           f)    forming a first traverse seal on said tube, said first traverse seal sealing all layers of  
15           said tube together, wherein said first traverse seal includes a portion of said vertical  
16           crease;

17           g)    dropping a product into a partially formed package created by steps a) through f);

18           h)    forming a second traverse seal on said tube, said second traverse seal sealing all  
19           layers of said tube together, wherein said second traverse seal includes a portion of said  
20           vertical crease; and

21           i)    severing said package from said tube at said second traverse seal;

22        wherein said vertical crease is heat-sealed only at said first and second traverse seals.

1        6.    The method of Claim 5, further comprising:

2            j)    standing up said package on said crease with said lettering oriented upright.

1        7.    The method of Claim 5, wherein said length of reclose strip comprises a composite  
2        structure which includes a two-sided tape having a first side bonded to said surface of said  
3        sheet of packaging film by a first pressure sensitive adhesive of some strength and a second  
4        side being coated with a second pressure sensitive adhesive and covered by a peel strip, said  
5        second adhesive having the characteristic when in tension of releasing the peel strip prior to  
6        releasing the tape.

1        8.    The method of Claim 7, wherein said first pressure sensitive adhesive has a bonding  
2        strength greater than that of said second pressure sensitive adhesive, said second pressure  
3        sensitive adhesive having the characteristics of bonding to both the tape and the surface of  
4        said sheet of packaging film and in tension, releasing the packaging film before releasing the  
5        tape such that the second adhesive will remain on the tape when the surface of the packaging  
6        film separates from the second adhesive.

1        9.    A vertical flexible reclosable stand-up package formed by the method of Claim 5.

1       10. A vertical form, fill, and seal machine for making a flexible stand-up package having a  
2       reclose strip incorporated therein, comprising:

3           a) a mechanism for supplying and advancing a continuous sheet of packaging film  
4           towards said vertical form, fill, and seal machine, wherein said packaging film has  
5           graphics oriented perpendicular to the direction of travel of said film;

6           b) an apparatus for attaching a length of reclose strip to a surface of said advancing  
7           sheet of packaging film along a longitudinal axis of said sheet of packaging film;

8           c) a former section for receiving and forming said sheet of packaging film into a  
9           tubular shape about a forming/fill tube such that said surface to which the reclose strip is  
10          attached is on the exterior of said tubular shape, said forming/fill tube having an entrance  
11          portion above said former section and an exit portion below said former section;

12          d) a heat seal mechanism for forming a back seal on said tubular shape thereby  
13          creating a film tube;

14          e) an apparatus for imparting a crease in said film tube; and

15          f) a pair of heat sealing jaws for imparting a traverse seal on said film tube, wherein  
16          said sealing jaws include a cutting mechanism for severing said package from said tube.

1       11. The vertical form, fill, and seal machine of Claim 10, wherein said attaching apparatus  
2       is integral to said supplying and advancing mechanism.

1 12. The vertical form, fill, and seal machine of Claim 10, wherein said length of reclose  
2 strip comprises a composite structure which includes a two-sided tape having a first side  
3 coated with a first pressure sensitive adhesive of some strength and a second side being  
4 coated with a second pressure sensitive adhesive and covered by a peel strip, said first  
5 pressure sensitive adhesive having a bonding strength greater than that of said second  
6 pressure sensitive adhesive, said second adhesive having the characteristic when in tension,  
7 of releasing the peel strip prior to releasing the tape.

1 13. The vertical form, fill, and seal machine of Claim 12, wherein said second pressure  
2 sensitive adhesive has the characteristics of bonding to both the tape and the surface of said  
3 sheet of packaging film and in tension, and releasing the packaging film before releasing the  
4 tape such that the second adhesive will remain on the tape when the surface of the packaging  
5 film separates from the second adhesive.

1 14. The vertical form, fill, and seal machine of Claim 10, wherein said attachment  
2 apparatus comprises a mechanism for feeding said length of reclose strip adjacent to said  
3 surface of said sheet of packaging film as it is advancing, and for positioning and adhering  
4 said length of reclose strip to said surface.

1 15. The vertical form, fill, and seal machine of Claim 14, wherein said attachment  
2 apparatus comprises a pivoting arm assembly which includes a roller guide mechanism  
3 which receives the length of reclose strip from a supply spool and directs it to a stationary  
4 bar guide assembly, said bar guide assembly positioning said length of reclose strip a lateral  
5 distance across the traverse of said advancing sheet of packaging film and an application  
6 roller for bringing said length of reclose strip into contact with said sheet of packaging film.

1 16. The vertical form, fill, and seal machine of Claim 15, wherein said pivoting arm  
2 assembly further includes a weight assembly.

1 17. The vertical form, fill, and seal machine of Claim 15, wherein said roller guide  
2 mechanism is pivotally attached to said pivoting arm assembly.

1 18. The vertical form, fill, and seal machine of Claim 15, wherein said bar guide assembly  
2 may be adjusted to increase or decrease the lateral distance said length of reclose strip is  
3 positioned across the traverse of said advancing sheet of packaging material.

1 19. The vertical form, fill, and seal machine of Claim 10, wherein said crease imparting  
2 apparatus comprises two forming plates attached to and extending below said forming/fill  
3 tube, at least one tension bar attached to and extending below said forming tube at a location  
4 approximately opposite from said forming plates; and at least one stationary tucker bar  
5 positioned between said forming plates.

1        20. The vertical form, fill, and seal machine of Claim 19, wherein said crease imparting  
2        apparatus further comprises a mechanism for blowing a pressurized gas against said  
3        packaging film, wherein said gas is blown against the exterior surface of said tube of  
4        packaging film at a point between said forming plates, wherein said mechanism for blowing  
5        a pressurized gas comprises gas ports in said tucker bar in communication with a pressurized  
6        gas source.